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A rare cause of inguinal mass in a female child: Hydrocele or cyst of the canal of Nuck

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Abstract The canal of Nuck is a different type of a patent processus vaginalis in females. It loses its communication between peritoneal cavity within the first year of the life. It presents as an inguinal mass in female. Sometimes it may present as incarcerated inguinal hernia and necessitates emergency exploration. It can be diagnosed on the operating table at the time of suspected incarcerated inguinal hernia.

Key Words Cyst of the canal of Nuck; inguinal mass; inguinal hernia

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Introduction

In the female child, hydrocele of the canal of Nuck usually presents as a painless, translucent, fluctuating, and nonreducible swelling in the inguinal area and labium major. Clinical findings for differential diagnosis are not enough because the abnormalities have similar characteristics [1]. Here, our aim was to present a case of hydrocele of the canal of Nuck and review of literature.

Case

A 3-year-old girl presented as a right sided inguinal swelling. The parents noticed the swelling the day of presentation. The family discovered a bulge in the right groin 2 hours ago. There was no history of ileus. At clinical examination she was in a good physical health. The swelling was translucent and it could not be reduced. Ultrasound examination of the right groin confirmed a diffuse cystic mass with a dimension about 3 cm, lying superficial and inferior on the left inguinal ligament. A communication was not confirmed with the peritoneum. This cystic structure was completely excised at surgery. (Fig.1). Histological examination of this cystic wall was ruled with focal reactive mesothelial hyperplasia and inflammation.

This result confirmed the diagnosis of hydrocele of the canal of nuck.

Figure 1. Cyst of the canal of Nuck.

Discussion

Counseller and Black classified hydrocele of canal of Nuck into 3 types [2] The most common type, which corresponds to encysted hydrocele of the cord in male, is one with no communication with peritoneal cavity forming an encysted fluid collection along the tract of descent, from the inguinal ring to the vulva. The second type corresponds to communicating hydrocele in male when there is a persistent communication with the peritoneal cavity. A third type is a combination of the two as a result of the inguinal ring constricting the hydrocele like a belt so that part is communicating and part is enclosed, giving this the name of hour glass type. In our case, the findings were corresponding with type I encysted hydrocele) True diagnosis can be obtained 100% by ultrasonography. This rare disease in literature can be defined as hypoechoic or anechoic, in the shape of comma or mushroom, generally unilocular and rarely multilocular (including linear septas) cystic mass. In our patient, it could not be distinguished from incarcerated inguinal hernia by ultrasonography and in this patient multilocular cyst of the canal of Nuck was diagnosed. It can also be difficult to distinguish from soft-tissue tumors such as inguinal lymphadenopathy and lipoma, endometrioma and from femoral hernia [3-6].

In the treatment of the disease, aspiration of the cyst causes recurrence, and this is not suggested [7,8]**.**

Surgical excision of the cyst and ligation of the neck of processus vaginalis should be considered as the standard therapy[9]. Ascertaining a definitive diagnosis on physical examination may not be possible; hence, further evaluation with ultrasound imaging will be helpful. Surgery is mandatory for final diagnosis and treatment.

CONFLICT OF INTEREST
None declared.

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